Abstract

An X-ray flux irradiation intensity distribution which is nonuniform due to a heel effect can be made uniform, and a subject can be prevented from being unnecessarily exposed. In addition, image quality of image data obtained with an X-ray CT scanner can be made uniform and improved in a body axis direction.

A heel effect compensation filter is configured to have a thickness distribution that uniforms an X-ray intensity angular distribution that is nonuniform in the body axis direction of a subject in an X-ray flux irradiated space. The space is formed by an X-ray flux diverging from an anode in a body width direction of the subject and diverging in a shape of an approximate sector in the body axis direction due to the heel effect, when the X-ray flux generated on the anode by irradiating a thermoelectron beam flux from a cathode to the anode is irradiated on the subject. The thickness distribution can be obtained using a predetermined formula.